

ABSTRACT OF DISCLOSURE

Technology for bending a tube through a desired curvature along its longitudinal axis while resisting buckling of the tube sidewalls. The technology, which has particular application for manufacturing grilles for motor vehicles, includes: a method of bending a tube through a desired curvature along its longitudinal axis; a tube having a desired curvature along its longitudinal axis made in accordance with this method; an apparatus for bending a tube having a predetermined cross-section through a desired curvature along its longitudinal axis; an apparatus for squaring a tube having a predetermined cross-section; an apparatus for reinforcing a portion of a tube during manufacturing; a stainless steel tube having a desired curvature along its longitudinal axis, a substantially polygonal cross-section, and a sidewall thickness in a range between one tenth of one millimeter and one millimeter; and finally a grille assembled from a plurality of such stainless steel tubes in spaced-apart disposition with means for connecting adjacent tubes together, including crosspieces connected to the tubes by conventional means, including welds, spot-welds, adhesive, or fasteners.

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